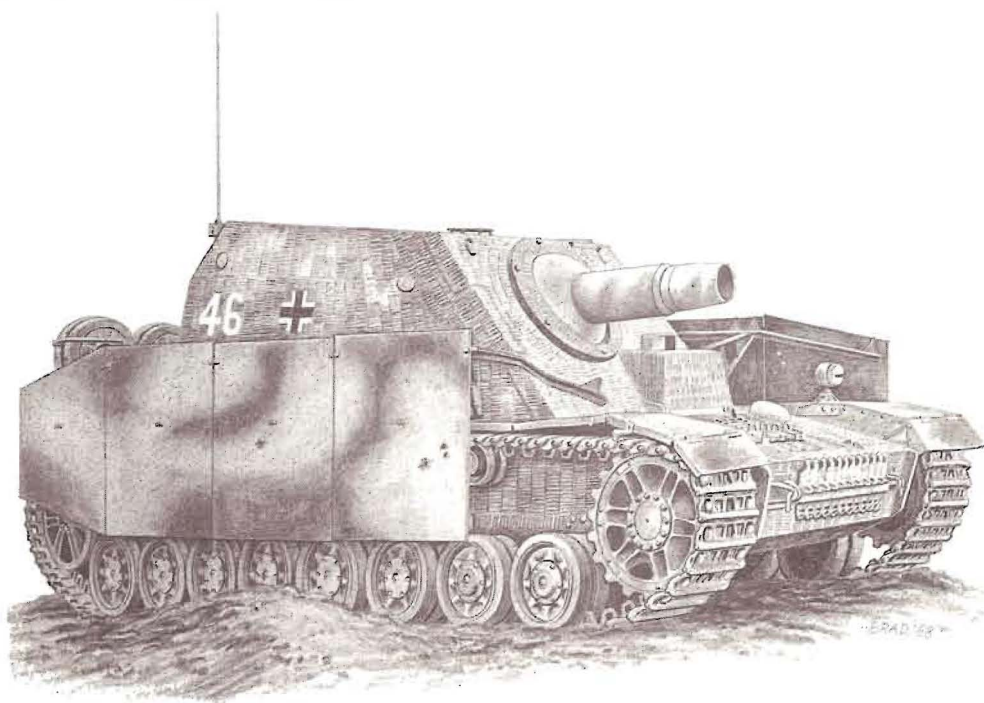




SERIES

4

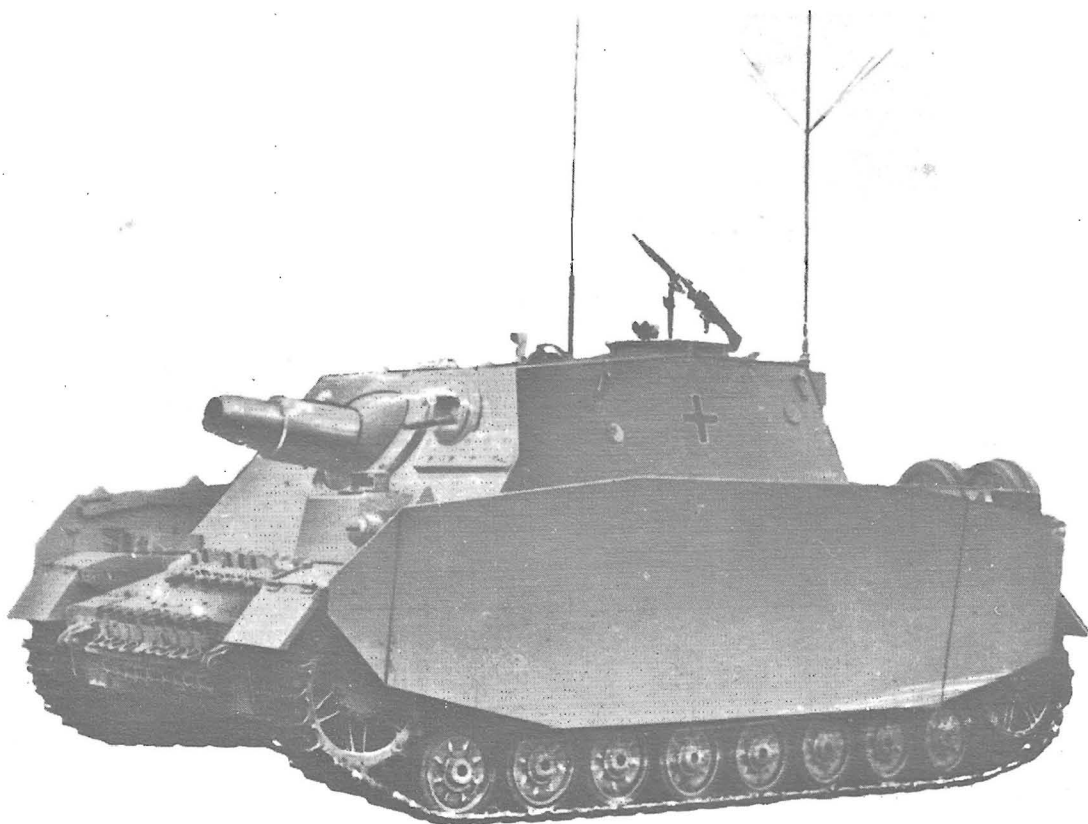
MILITARY VEHICLE PRINTS



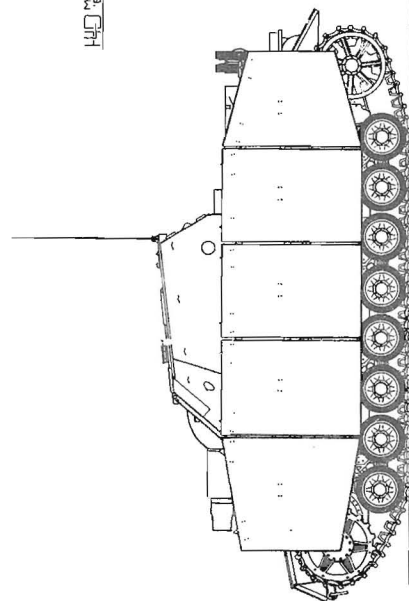
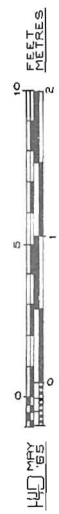
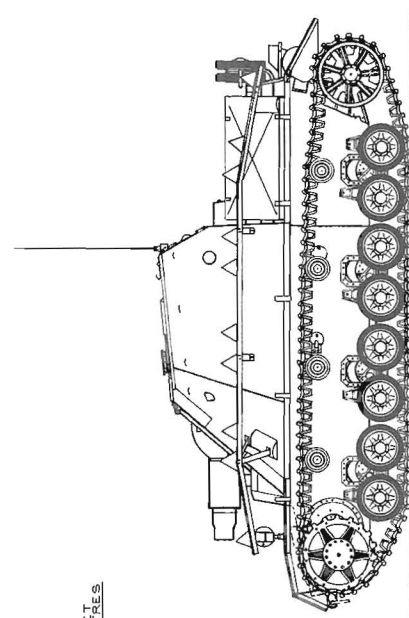
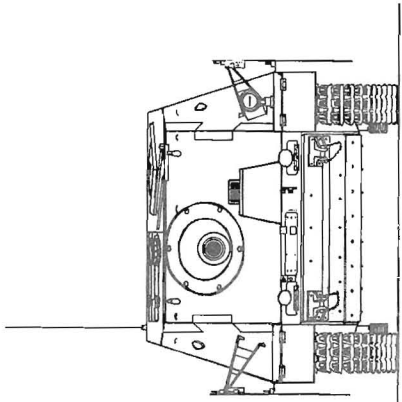
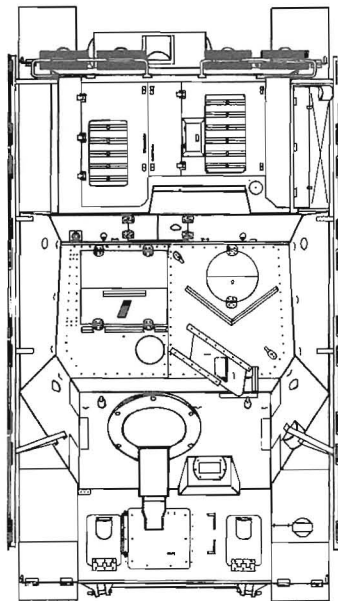
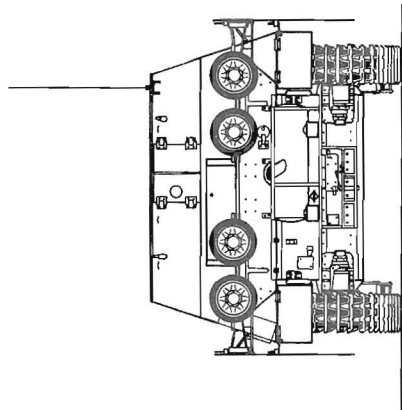
SERIES FOUR

Sturmpanzer IV "Grizzly Bear"	(GE)
T 34/85	(SU)
KV 1 & 2	(SU)
Jagdpanzer 38 "HETZER"	(GE)

15p
BELLONA
30p



ABOVE: One of the final production models of the 'Brummbaer' which had a machine gun in a ball mounting similar to the 'Tiger' Ausf. E. Further improvements over the vehicle drawn is the new cupola and the facility for carrying a FLA MG 34 machine gun for AA defence.



Sturmpanzer IV 'Grizzly Bear' - 1944
 Scale 1:76 (4mm. to 1 foot) Drawn by H. L. Doyle

Sturmpanzer IV 'Brummbar' ('Grizzly Bear'), (1943)
15cm. StuH 43 L/12 on chassis of Pz. Kw. IV model H/J

Preliminary requirements for a heavy assault vehicle were discussed during September 1942, and were a reflection of the heavy street fighting in Stalingrad where the existing small calibre weapons of tanks and assault guns had proved ineffective against heavily fortified buildings. Studies were ordered on the feasibility of mounting heavy infantry guns in either the StuG 111 chassis or the Pz Kw IV chassis. During the previous year the 15cm. SiG 33 heavy infantry howitzer had been mounted experimentally in Pz. Kw. 1, 11 and 111 chassis, and only 12 of the latter were built before production was abandoned due to the changed requirements of the new specification.

In October 1942, Hitler ordered that 40-60 SiG 33 guns were to be fitted in the Pz Kw IV chassis instead, and this led to the building of the Sturmpanzer IV (Sd Kfz 166). This vehicle mounted the StuH 43 L/12 which was based on the original SiG 33. In April 1943, the first of the Sturmpanzers IVs went into service with the assault companies of the panzer divisions. These early models were based on the Pz Kw IV model F, weighing about 30.4 tons due to the additional armour, and they differed substantially from the version in the drawing. Main variations were a short collar on the gun, different roof layout, and a Tiger type driver's visor. A similar version was built on the Pz Kw IV model G chassis and this type saw service on the Russian and Italian fronts in 1943. Subsequently the model H chassis was utilised together with the model J which is the subject of the drawing. This type appeared on the Italian front in May/June 1944 and subsequently in Normandy. The example from which the drawing was made was lost in the first week of August 1944 during the fighting leading to the encirclement of Falaise. This later model had a lower weight of 28.2 tons, due to the different armour distribution on the J chassis.

Some of the final Grizzly Bears to leave the factory are thought to have had a ball-mounted MG 34 (as on the Panther) fitted in the left-hand front of the superstructure. Production of the chassis was carried out at the Nibelungen-Werke and assembly as a Sturmpanzer was completed at the factory of Alkett A. G.

Grizzly Bears were successful in their limited role of street fighting against heavily fortified or entrenched positions. It was an excellent infantry weapon though it must have suffered from the lack of a machine-gun for self defence. The earlier chassis used was very much overloaded and mechanical reliability was therefore impaired.

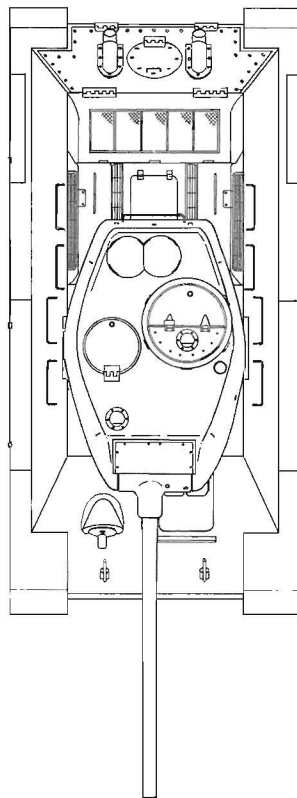
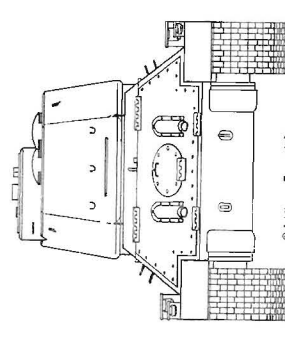
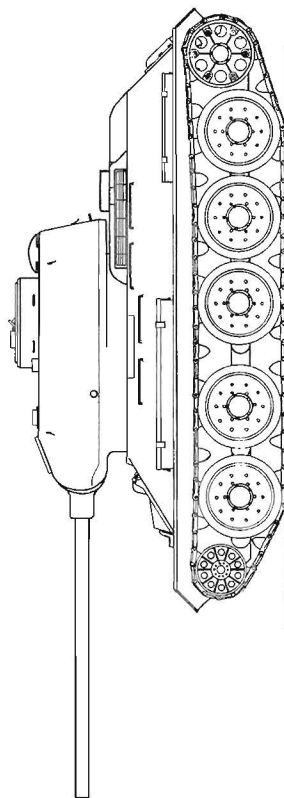
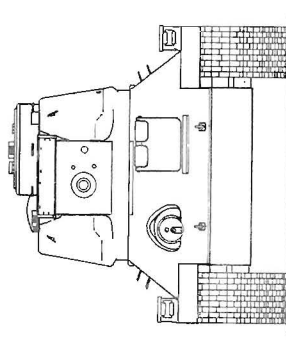
Technical Details

Weight 28.2 tons; Crew 5; Armament 1 x 15cm. StuH 43 with 38 rounds (separate charge) HE/HC/Smoke; Elevation, plus 30 degrees to minus 8.5 degrees; Traverse 8 degrees right and left; Range 4,700 yds.; Shell weight 84 lbs; Engine Maybach HL 120 TRM V-12, 11.87 litre, water cooled petrol type, developing 300 b.h.p. at 3,000 r.p.m.; Gearbox 6 forward, 1 reverse; Max. road speed 23.7 m.p.h. (38 k.p.h.); Cross-country, 9.5 m.p.h. (15 k.p.h.); Range 125/80 miles (200/130 Km); Max. gradient 30 degrees; Fording 3ft. 1½ ins.; Trench crossing 6ft. 7½ ins. Armour 100 mm. at 50 degrees (front superstructure), 80 mm. at 75 degrees (nose), 30 mm. vertical (hull sides), 70 mm. & 30 mm. at 72 degrees (superstructure sides), 20 mm. vertical and 78 degrees (rear hull) 20/60 mm. at 65/88 degrees (rear superstructure), 20 mm. (deck), 10 mm. (belly).

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T. 34/85 - 1943
 Scale 1:76 (4mm. to 1 foot) Drawn by A. J. D. North

Medium Tank T 34/85 (1943)

One of the most celebrated tank designs of all time was the T34 medium vehicle with which the Soviet Army confronted the Germans soon after their invasion in June 1941. After a few brief appearances the T34 had rendered all German tanks, tank guns and most anti-tank guns obsolete overnight. A well-guarded secret, the T34 took the Germans completely by surprise as no indication of the machine's existence had been allowed to slip out before its first appeared in action. The only previous indication of Soviet equipment and tactics had been the Russo-Finnish war of 1939-40, where the Russians had employed modest tank forces.

Initially the T34 was used in ones and twos only, supporting infantry or light tanks. At this stage, superior German tactics enabled them to hold their own against the T34, but from the Battle of Borodino onwards (October 1941) the vehicle was employed more and more in mass attacks where it enjoyed overwhelming superiority over German armour. Sloped armour all round, high speed and a gun of higher calibre than anything the Germans possessed at the time, were the salient features of the T34. Its simple design enabled it to be produced quickly in its thousands when it was most needed. Indeed, at one stage of the Battle of Stalingrad T34s were being driven straight off the production line at the Dzerzhinski Tractor Factory and into action. German appreciation of the design led to the introduction of the Panther, which copied many of the T34's features, particularly the sloping armour and the full-width body allowing a wide turret to be installed.

The T34 ran to three different production models with its original 76.2mm. gun. The weight at this time was 26.3 tons. One disadvantage with the early models was that the gunner was also the tank commander with the result that he could perform neither duty particularly efficiently. A version with a larger turret subsequently appear and this was developed in 1943 to mount a bigger calibre (85mm.) gun as well. The resulting model was known as the T34/85 and is the version shown in this drawing. A commander could be accommodated in this turret which now held four men. By 1944 the T34/85 was in large scale service and it remained standard equipment in the Communist armies for some years after the war being encountered in Korea with the North Korean army. It is still in service with some armies behind the Iron Curtain and is also employed by the U. A. R.

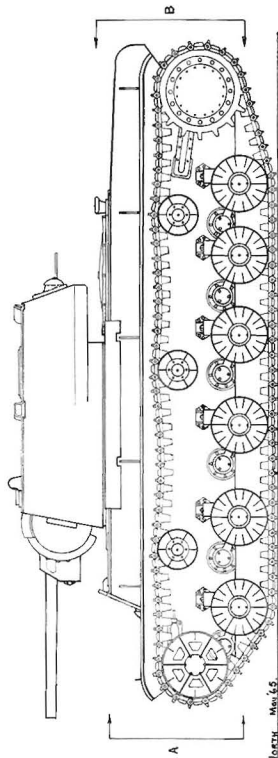
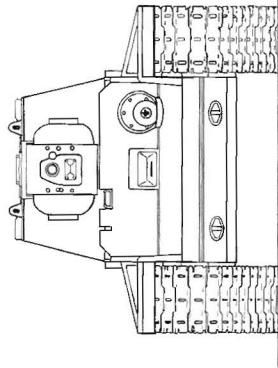
Technical Details

Weight 32 tons; Crew 5; Max. road speed 32 m. p. h. ; Engine V-12 diesel type W. 2, 500 h. p. at 1,800 r. p. m. ; Range 186 miles. Armament, 1 x 85 mm. SiS53 gun, 51.5 calcs., 2 x 7.62mm. machine guns; Suspension, Christie type; Armour, 45mm. (front, sides and rear), 75mm. (turret front and rear), 95mm. (turret sides), 75mm. (for driver).

Modelling

Use wheels from Airfix Centurion. Make up chassis pan from card. Then make up superstructure.

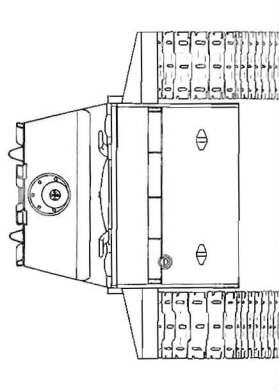
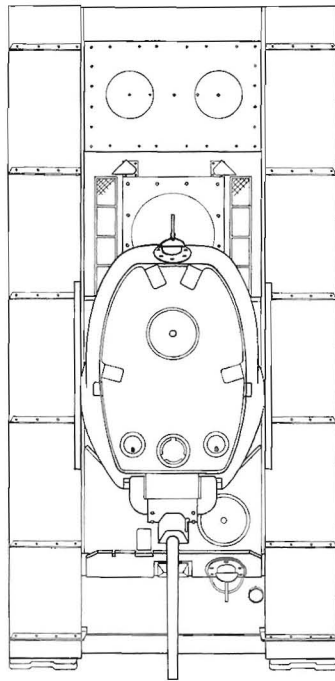
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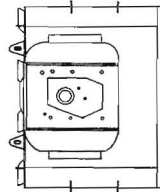
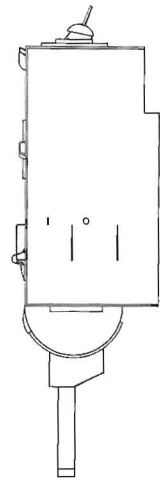
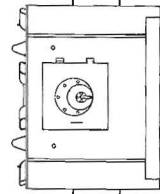
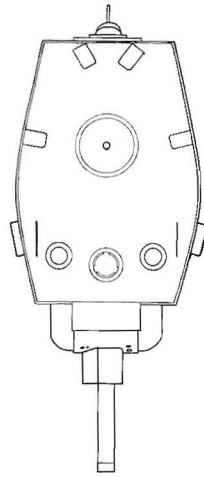
SECTION A



© A. J. North May 1940



SECTION B



K. V. 1 & 2 - 1940
Scale 1:76 (4mm. to 1 foot) Drawn by A. J. D. North

Klimenti Vorishilov KV 1 & KV 11 (1940)

The Klimenti Voroshilov was another of the surprises in store for the Germans following the invasion of Russia in June 1941. Together with the T 34, the KV 1 formed the main backbone of Russia's armoured forces in the 1940-42 period.

It was quickly found to be a well armoured vehicle - in fact small calibre anti-tank shells bounced straight off the KV except at point blank range. Once again it was only matched by the better tactics and training of German tank crews. The KV 1 ran to four different marks; the KV 1 of 1939, the KV 1A of 1940, the KV 1B and KV 1C of 1942. All these incorporated minor improvements over each other but were generally distinguishable externally by their different cast and welded turrets. A particular feature not found in British or German tanks was the rear firing machine gun in the turret. The final production version of the KV was the KV 85 which appeared in 1943. It was fitted with the same turret as the T 34/85 shown on Bellona Print 15r. The KV chassis form was adopted as the basis of all subsequent Soviet heavy tanks and assault guns, the torsion bar suspension and small road wheel being also found on the JS, JSU and T10 series as well as on the various modern missile carriers adapted from the JS chassis. Simplicity and durability were features of the KV and these were inherited by the JS 1 & 11 which were the KV's successors in service.

An assault version of the KV was also produced, mounting a heavy 122mm. or 152mm. howitzer in a high turret. This is shown on the drawing. However, this version was not successful due to the excessive overall height and the clumsiness of the arrangement. Subsequently the 122mm. and 152mm. weapon was fitted to the KV, T34 and JS chassis to form the JSU 122, JSU 152, SU 122 and SU 152 assault guns. The KV 11 was soon withdrawn from service.

Technical Details

Max. road speed 25 m.p.h.; Crew 5, Armament 1 x 76.2mm gun of 30.5 cal.; 3 x 7.62mm machine guns; Weight 43.5 tons (KV 1) and 46 tons (KV 11); Engine, V-12 diesel type, 600 h.p. at 2,000 r.p.m.; Armour, 75mm (front), 60 mm (side), 90 mm (mountlet), 75 mm (turret sides).

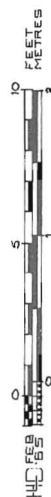
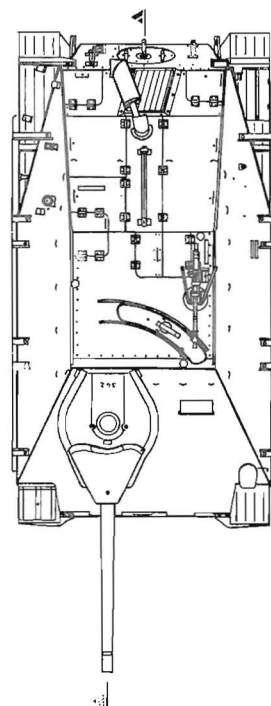
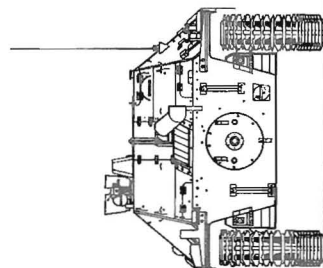
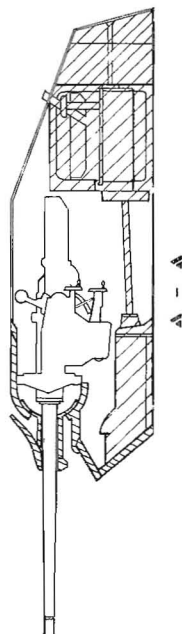
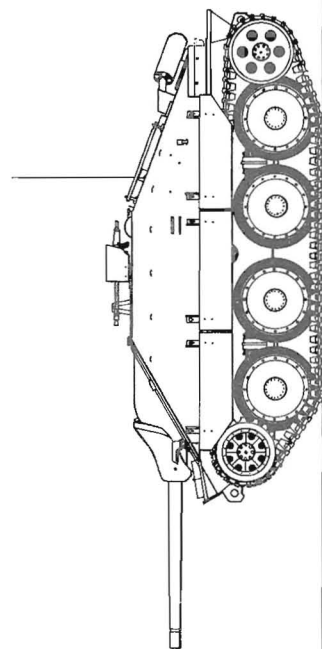
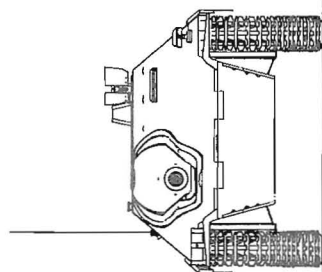
Modelling

Use complete chassis of Airfix JS 3 kit with front plate removed from chassis floor. Then rebuild superstructure straight on to chassis, starting with flat full-width sheet across top of chassis sides.

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Jagdpanzer 38 'Hetzer' - 1944
 Scale 1:76 (4mm. to 1 foot) Drawn by H. L. Doyle

JagD Panzer 38(t) 'Hetzer' ('Baiter') 1944)

The Hetzer was developed specially as a tank destroyer in 1943 on the widened chassis of the Czech TNH-P light tank of 1938. This vehicle, known as the Pz Kw 38(t) served with the German army throughout the war, first as a battle tank, then as a modified s.p. carriage for several different types of weapon. It was renowned for its simplicity and reliability. There were over 4,000 built.

In March 1943, Guderian asked for a light tank destroyer to be produced, but it was not until the following December that the full production facilities of the Pz Kw 38 were ordered to switch to manufacture of the Hetzer design. It was to replace the existing inadequate s.p. anti-tank guns and the towed anti-tank guns of infantry divisions on the Russian front whose units were suffering heavy losses in the face of Russian armour attacks.

By May 1944 the first vehicles were in service and a total of 1,577 Hetzers were built between then and the close of hostilities in May 1945. Production was shared by Skoda and the 'parent' firm for the design, B. M. M. of Prague. Following the Normandy invasion, Hetzers were also sent to the Western Front where they were encountered in some numbers by the Allies during the Ardennes Offensive of December 1944. This was at the expense of Eastern Front units, whose Panzer Jager companies were only one-third equipped with Hetzers when the massive Russian attacks took place in spring 1945.

The Hetzer mounted a standard Pak 39 without a muzzle brake, which was quite adequate for its purpose. A low and compact silhouette, together with well sloped armour gave good protection, though the crew were rather cramped as a result. Several small improvements were made during production including a better shaped mantlet and later pattern road wheels, idlers and drivers. The drawing represents the later production type. Hetzers served post-war with the Czechoslovak army and 158 were purchased in 1946-47 for the Mobile Brigades of the Swiss Army, under the designation Pz Jg G13. These vehicles were given new 160 b. h. p. engines.

Technical Details

Weight, 158 tons; crew, 4; Armament, 1 x 7.5 cm. PaK 39 L/48 with 41 rounds; Elevation, minus 6 degrees to plus 12 degrees; Traverse, 5 degrees right and left; 1 x 7; 92 mm. MG 34 with 12 50-round drums; sight ranges for PaK - 2,500 yds., APCBC - 1,500 yds., AP 40 - 3,300 yds., HE/HC/Smoke; Engine, Praga 6-cyl. o. h. v. water cooled in-line petrol type developing 150 b. h. p. at 2,600 r. p. m.; Gearbox, Praga-Wilson, 5 forward and 1 reverse; Max. road speed, 26 m. p. h. (42 k. p. h.); Cross-country, 9 m. p. h. (14 k. p. h.); Range 130/80 miles (217/130 Km.); Max. gradient 25 degrees; Fording depth, 3 ft.; Trench, 4 ft. 3 ins.; Armour, 60 mm. at 50 degrees (lower front), 60 mm. at 30 degrees (upper front), 20 mm. at 75 degrees (hull sides), 20 mm. at 50 degrees, (superstructure sides), 8 mm. at 20 degrees (superstructure rear).

Modelling

Make up card tray for lower hull. Then card superstructure and cement together. Use Airfix Panther wheels.

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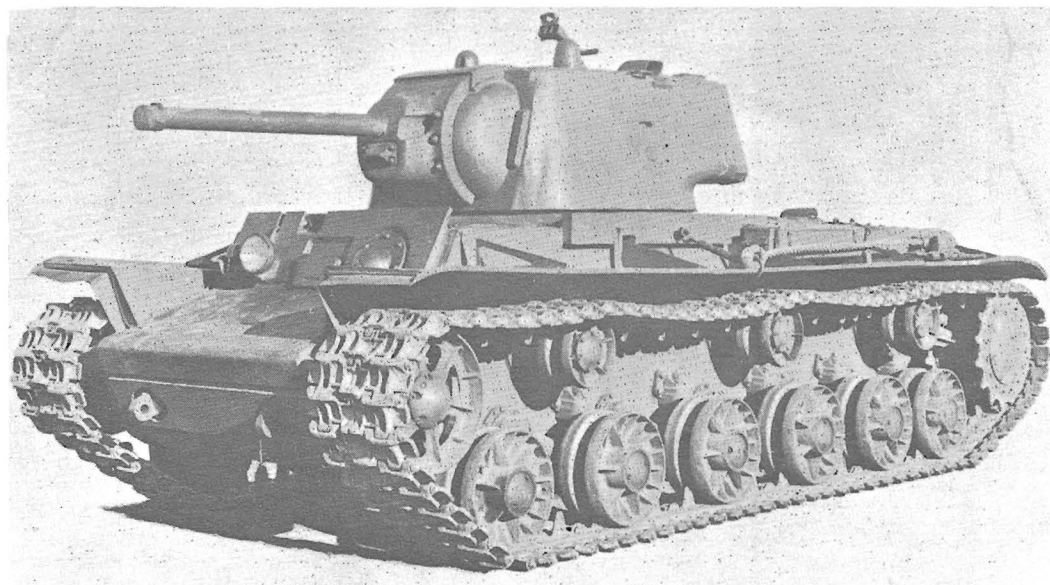
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ABOVE: An interesting rear view of the T 34/85 showing the details of turret and rear hull.

BELOW: The KV I C, the subject of the drawing differs from the earlier models of the KV series by having a cast turret of thicker armour which gave much increased protection. The additional armour on the drivers plate was now standard.





ABOVE: The massive turret of the KV II proved a great disadvantage making it very easy to locate. The vehicle seen here is an earlier version, its turret being formed of flat sides unlike that featured in the drawing. (BELLONA WARPICS Photo)

BELOW: The excellent compact shape of the 'Hetzer' was its greatest defence. Overall height of little over six feet enabled it to be easily hidden. Close in defence was provided for by the remotely controlled machine gun seen on the roof. (Imperial War Museum Photo)

